

## **OP-52**

### **Recent Advancements In In-Vitro Fertilisation**

**Yashi Asthana<sup>1</sup>, Rajakumari K<sup>1\*</sup>**

<sup>1</sup>Dept of Bio-Engineering, School of Engineering,

<sup>1</sup>Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai-117, Tamil Nadu, India

With the birth of louise brown in 1978, Invitro fertilization has become the therapeutic mainstay for female infertility. In 1992, assistive insemination by using intra cytoplasmic sperm injection a graft of IVF technology, trumpet a new era in the treatment of male factor infertility. The field of assistive reproductive technology progressing with many new advances in the last decade. The present review focusses on the methods to improve the oocyte quality in older women and new stimulation that may improve the number of oocytes retrieved during invitro fertilization cycle. The reproductive amplitude of women declines significantly in the fourth decade which is directly associated to age related decrease in oocyte quality and quantity techniques were originally established to solve tubal related infertility problems in women with nano spermic partners. The oocyte maturation process involves a combination of nucleolus, cytoplasmic and epigenetic changes all of which require energy that is provided by mitochondria and oxidative phosphorylation. Innovations in Assisted Reproductive Technologies (ART) have overcome numerous seemingly insurmountable barriers to allow couples the chance to have families.Under ART there is a method called Artificial Insemination which is sometimes called intrauterine insemination (IUI), involves infusion of the male partner's (or a donor's) sperm into a woman's uterus at or just before the time of ovulation. IUI can guide couples with so called unidentified infertility or couples where the male partner has lesser sperm abnormalities achieve pregnancy. ICSI (intracytoplasmic sperm injection) is used for the same sense as IVF, but especially to overcome sperm problems. ICSI follows the same course as IVF, except that ICSI involves the blunt injection of a single sperm into each egg to hopefully achieve fertilisation However, there is increasing evidence that ART-conceived children may be at greater risk of prenatal complications than consistently conceived children and that knowledge on long-term health effects of ART is incomplete. The respondents determined that the most positive aspect of affable IVF was the low doses of hormones used. Abandoment of cycles and breakdown of oocyte retrieval were perceived the most negatively. The favourable IVF treatment was percieved as a first step, assisting the hope of success with a standard treatment.

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